

medical specimen collection and transportation. Central access device 100" comprises housing 102" which includes a test tube 700 integrally formed therein. More specifically, the second part 110B of the interior 110 actually comprises an internal cavity of the test tube 700. In one exemplary embodiment, the test tube 700 is integrally formed as part of outer wall 108 so that the connector 125 and a portion of first needle 122 is disposed within the test tube 700. In this embodiment, the central access device 100" is designed to act as a collection and transportation device in that once a specimen is collected in the test tube 700 using the procedures set forth hereinbefore, the central access device 100" is disassembled until only the housing 102" including the test tube 700 remains. This one piece may then be packaged and transported to the desired location, such as a laboratory or testing facility. Thus by reducing the steps necessary for the collection and transportation of the bodily fluid, the present central access device 100" reduces the risk of contamination because it involves less steps and less human contact than previous procedures.

According to the present invention, a closed system central access device is provided. The device has a wide range of potential applications and is particularly well suited for procedures which require withdrawal of bodily fluids or administration of substances to a body. In one exemplary embodiment, the device comprises a closed system central venous access device. The device of the present invention would significantly decrease the risk of exposure from blood-borne pathogens to healthcare workers or the like during the following procedures which are merely illustrative and not limiting: injecting blood into a vacuum tube or specimen container, recapping syringes with needles containing blood by hand, removing needles from syringes containing blood by hand, using a needle to draw blood from a venous access device. Other intended uses for the devices disclosed herein are uses in medication administration and medical procedures, e.g., plasmaphoresis, blood donation, and synovial aspiration.

While preferred embodiments have been shown and described, various modifications and substitutions may be made thereto without departing from the spirit and scope of the invention. Accordingly, it is to be understood that the present invention has been described by way of illustration and not limitation.

What is claimed is:

1. A protective shielding assembly for use in transferring or receiving fluid from a patient, the assembly comprising:
  - a housing having an outer wall and an intermediate wall extending between the outer wall of the housing, the intermediate wall partitioning the housing into a first section and a second section;
  - a first needle extending from the first section to the second section of the housing through the intermediate wall, the first needle having a first portion disposed in the first section and a second portion disposed in the second section;
  - a first connector disposed in the second section about the first needle for connecting a first member to the first needle in the second section;
  - a second needle disposed at least partially in the first section of the housing and extending through the outer wall of the housing, the second needle terminating in a needle-less fluid port, the fluid port for fluid connection to a second member;
  - a removable guide liner having a body including a first end, an opposing second end, and an outer wall

complementary to the outer wall of the housing so that the removable guide liner is intimately received within the first section of the housing, the body having a guide slot formed therein and extending from the first end to an end wall proximate the second end, the end wall including an opening formed therein for receiving the first portion of the first needle and a portion of the second needle so that the first portion and the second needle extend into the guide slot, the guide slot receiving a third member which is fluidly connected to the first and second needles so that a fluid transfer may occur between the third member and at least one of the first and second members where the first and second needles are fully encased within the housing so as to protect the user from contact therewith.

2. The protective shielding assembly as set forth in claim 1, wherein the first member is selected from the group consisting of a sealed test tube, a syringe, and a collection device.

3. The protective shielding assembly as set forth in claim 1, wherein the first member has a second connector which mates with the first connector to securely retain the second member in the second section and from fluid communicating between the first member and the first needle.

4. The protective shielding assembly as set forth in claim 1, wherein the third member comprises a central line assembly including:

an elongated body having a first end and a second end with a channel extending therethrough from the first end to the second end, the first end having a locking flange for locking the central line assembly to the guide liner and the housing, the second end being a capped end for selectively receiving the first portion of the first needle and the second needle, and

a central line connected to the first end of the body so that the central line is in fluid communication with the first and second needles.

5. The protective shielding assembly as set forth in claim 1, wherein the housing comprises a substantially tubular member including a first annular flange at a first end thereof and a second annular flange at a second end thereof.

6. The protective shielding assembly as set forth in claim 1, wherein the removable guide liner comprises a substantially tubular member having an annular guide liner flange at the first end.

7. The protective shielding assembly as set forth in claim 4, wherein the capped end comprises a self-sealing membrane.

8. The protective shielding assembly as set forth in claim 4, wherein the central line assembly includes a third connector disposed at the first end of the elongated body, the third connector mating with a complementary fourth connector provided at one end of the central line, wherein the mating between the third and fourth connectors retains the central line to the elongated body and provided fluid communication between the central line and the channel.

9. The protective shielding assembly as set forth in claim 4, wherein the central line is selected from the group consisting of a central venous line, a catheter, and a shunt.

10. The protective shielding assembly as set forth in claim 1, wherein the fluid transferred is selected from the group consisting of blood, cerebral-spinal fluid, pleural fluid, synovial fluid, peritoneal dialysate, amniotic fluid, and liquid medication.

11. The protective shielding assembly as set forth in claim 1, wherein the second member comprises a syringe.

12. The protective shielding assembly as set forth in claim 1, wherein the third member is selected from the group consisting of a sealed test tube and a syringe.

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13. A protective shielding assembly for use in transferring or receiving fluid from a patient, the assembly comprising:

- a housing having an outer wall and an intermediate wall extending between the outer wall of the housing, the intermediate wall partitioning the housing into a first section and a second section, wherein the second section comprises a closed collection receptacle; 5
- a first needle extending from the first section to the second section of the housing through the intermediate wall, the first needle having a first portion disposed in the first section and a second portion disposed in the closed collection receptacle; 10
- a second needle disposed at least partially in the first section of the housing and extending through the outer wall of the housing, the second needle terminating in a needle-less fluid port, the fluid port for fluid connection to a first member; 15
- a removable guide liner having a body including a first end, an opposing second end, and an outer wall

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complementary to the outer wall of the housing so that the removable guide liner is intimately received within the first section of the housing, the body having a guide slot formed therein and extending from the first end to an end wall proximate the second end, the end wall including an opening formed therein for receiving the first portion of the first needle and a portion of the second needle so that the first portion and the second needle extend into the guide slot, the guide slot receiving a third member which is fluidly connected to the first and second needles so that a fluid transfer may occur between the second member and at least one of the closed collection receptacle and first member where the first and second needles are fully encased within the housing so as to protect the user from contact therewith.

14. The protective shielding assembly as set forth in claim 13, wherein the closed collection receptacle comprises a sealed test tube.

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